EDUCATION IN THE CLINICAL YEARS: DELUSION OR REALITY*

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In view of the health needs and associated costs of a steadily increasing elderly population, geriatric training has received considerable attention. The American Geriatrics Society and the Institute of Medicine, for example, have addressed the education of health professionals.[1,2] In its 1978 report,[2] the Institute of Medicine identified the special body of knowledge of aging and the particular problems of the aged relevant to all health professionals. The report contained information about the biological, behavioral, and social changes that are a normal concomitant of aging; the role of these changes in producing functional impairments or in making individuals more vulnerable to environmental factors leading to specific diseases; and the health care and social resources most necessary to manage problems of the aged. The Institute of Medicine accorded equal importance to the skills and attitudes with which practitioners use this body of knowledge, and its report further recommended that medical education programs at all levels provide more coverage of geriatrics and gerontology.

Major efforts have also been made to define an appropriate curriculum at different educational levels. All attempted to identify the specific knowledge, skills, and attitudes that could constitute a valid curriculum in geriatrics.[3-6] While there is broad consensus as to curricular content, and all identify both preclinical and clinical curricular needs for the medical undergraduate education, substantial variations exist in proposed implementation.

Two of the most recent contributions to education in geriatrics and gerontology deserve special mention: the Proceedings of the Regional Institutes on Geriatrics and Medical Education sponsored by the Association of American Medical Colleges and the Report on Education and Training in Geriatrics and Gerontology by the National Institute on Aging.[5,7] In the Associ-

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ation report medical schools are urged to: Increase the attention paid to the aging process in elderly patients by setting up "a group of faculty members interested in gerontology and geriatric medicine and training other faculty members in these areas;" seek expanded support for research on aging to allow schools to improve clinical care and stimulate medical students' interest; offer medical students a variety of clinical settings and encounters with the elderly "through which students can learn special arrangements for the care, diagnosis and treatment of the elderly;" arrange for medical students to meet healthy, independent elderly people; and encourage scientific groups and medical-specialty societies to develop and distribute educational materials dealing with the concerns of the elderly in their particular fields.

In the National Institute on Aging report, an ad hoc committee* recognizes that more adequate education and training in geriatrics and gerontology would result in a higher quality of care for older people. This higher quality of care would include more effective maintenance of health and functional abilities, and would have a favorable impact on the costs of care. This committee further recommends that geriatrics and gerontology be extended and integrated into the basic professional education of health and other human service professionals through a variety of approaches and mechanisms, and that education and training for services should be strengthened through existing activities and additional innovative approaches. It further urges the development of more and earlier interest in teaching and research careers among students and resident physicians to increase the number of recruits into the field.

Some medical schools have responded to the call for education in geriatrics by offering courses to teach future physicians to provide better care for the elderly. In 1976 only two medical schools required undergraduate courses in gerontology or geriatrics, and only 15 had separate educational programs of any kind.[8] By April 1979 81 schools reported that they had developed or were developing programs with most institutions entering the field that year.[9] Rapid expansion was most evident in 1980, facilitated by public and private sector grants.[10] By that time more than 190 programs and courses and 260 books and audiovisual packages had been created for use by medical students, residents, geriatric fellows, and practicing physicians. Of the 126 medical schools contacted, 92 reported some type of geriatric

*The committee included representatives of the National Institute on Aging, Administration on Aging, Health Resource Services Administration, and National Institute of Mental Health as well as representatives of the director of the National Institutes of Health, the Veterans Administration and the Secretary of the Department of Defense.

program. Seventy-six schools reported 133 programs at the undergraduate level; most were elective and of variable quality. The elective offerings had few enrollees, and fewer than 10% were a regular part of the undergraduate curriculum. There were two or fewer faculty members in about half of the cases, and only a small percentage had specialty training in geriatrics.

A 1983 survey found that medical schools were continuing to pay more attention to the issues of aging.[11] About 90% of the 100 responding schools indicated some activities in geriatric education. The average full-time equivalent faculty in geriatrics was only 2.5, and the number of full-time faculty members in geriatrics was not reported.

This paper assesses the current state of geriatric clinical instruction in our nation's medical schools and compares it to a survey on geriatric education, including the clinical years of the undergraduate curriculum, conducted in 1979-80 by U.C.L.A.'s Multicampus Division of Geriatric Medicine.[10] The survey seemed appropriate since five years had passed and, although medical educators appear to be concerned with geriatric education, actual progress made in the clinical years was uncertain.

METHODS

The 125 American medical schools with undergraduate clinical programs were surveyed regarding the extent of geriatrics-related instructional hours and programs at all levels of medical education during the 1983-84 academic year. Surveys were sent to chairmen of each medical school's department of internal medicine, psychiatry and family practice (for 99 schools with departments of family practice).* The only exception in the pattern of distribution was that surveys were sent directly to the 17 divisions of geriatric medicine identified in the 1983-84 *AAMC Directory of American Medical Education*[12] rather than to the related department. Respondents were asked about preclinical and clinical hours and courses sponsored by the department. Where clinical programs were offered, the survey called for description of them in terms of length, training sites used, number of students per year, and whether they were elective or required.

Surveys were mailed at the end of July, and by the end of August 50% had been completed and returned. During the next several months, all non-

*Concurrently with the surveys sent to department chairmen, deans were surveyed as to preclinical hours of geriatrics-related instruction and postgraduate training, including fellowships. The overlapping question on preclinical hours (identical on both survey forms) was included to increase the accuracy of responses. These data will be reported elsewhere.

TABLE I. CLINICAL PROGRAMS REPORTED BY MEDICAL SCHOOLS (BASED ON AGGREGATED DATA FROM DEPARTMENTS OF MEDICINE, FAMILY PRACTICE AND PSYCHIATRY)

Clinical programs in every department:	15.2% (n=19)
Clinical programs in at least one department:	55.2% (n=69)
No clinical programs but clinical instruction as part of other courses or brief courses in at least one department:	12.0% (n=15)
No clinical programs or instruction in any department:	17.6% (n=22)
	100% (n=125)

respondents were contacted by telephone, and the missing surveys were completed as interviews. By mid-November a 100% response had been achieved for the 349 department or division chairmen contacted.

RESULTS

As shown in Table I, approximately 15.2% of schools had clincal programs in each of the two or three departments, while 17.6% had no clinical programs at all. Slightly more than one half of the nation's medical schools had clinical programs in at least one department. A clinical program is defined as a substantive, discrete training activity (for example, clerkship) devoted solely or almost exclusively to geriatrics, the average duration of such a program being four weeks, full time. A second category, instruction as part of other courses, is defined as geriatric content in required core rotations and clerkships or as elective lecture courses of brief duration.

In Table II it is noteworthy that 35.2% of departments of internal medicine, 41.4% of departments of family practice, and 49.6% of departments of psychiatry had no clinical programs, although some planned to initiate them during the 1984-85 academic year.

Table III describes the number and change in number of programs since 1979-80. There is a modest but substantial increase in number of clinical programs; the number of total programs has doubled, although only 142 of a possible 350 departments (40%) sponsored them.

Table IV describes program status with respect to mandatory, selective or elective offerings. Note that only 1.2% are required or mandatory and the vast majority are elective. The percentage of required programs is actually lower for 1983-84 than for 1979-80, although the definition of a program in the current survey is more restrictive. Further, the average number of students enrolled per year in elective geriatric programs is limited (averaging 6.2 per program per year), and accounts for approximately 2.3%

TABLE II. PROGRAMS REPORTED BY DEPARTMENT

	Internal medicine (n=125)*	*Family practice (n=99)*	*Psychiatry (n=125)*
Departments with:			
One or more clinical programs	54.4% (n=68)	37.4% (n=37)	29.6% (n=37)
Instruction included as part of other courses or brief courses only	10.4% (n=13)	22.2% (n=22)	20.8% (n=26)
No clinical programs or other instruction	35.2% (n=44)	41.4% (n=41)	49.6% (n=62)

*The Department of Adult Development and Geriatrics at Mount Sinai School of Medicine has been included as Internal Medicine.

TABLE III. NUMBER AND CHANGE IN NUMBER OF PROGRAMS: 1979-80 vs. 1983-84 (CURRENT RETURNS COMPARED TO SAME MEDICAL SCHOOLS AND DEPARTMENTS IN 1979-80)

Sponsoring departments	*Internal medicine (n=68)*	*Family practice (n=37)*	*Psychiatry (n=37)*	*Total (n=142)*
Number of clinical programs in 1983-84	91	31	47	169
Number of clinical programs in 1979-80	50	19	15	84

*13 of the 142 programs were cosponsored but are counted only once (mostly as Internal Medicine); thus, the lower number of Family Practice programs (31) than sponsoring departments (37).

TABLE IV. PROGRAM STATUS

Number of programs	*Internal medicine (n=91)*	*Family practice (n=31)*	*Psychiatry (n=47)*	*Total (n=169)*
Required	2.2% (n=2)	0 (n=0)	0 (n=0)	1.2% (n=2)
Selective	7.7% (n=7)	9.7% (n=3)	21.3% (n=11)	12.4% (n=21)
Elective	90.1% (n=82)	90.3% (n=28)	76.6% (n=36)	86.4% (n=146)

Note: In 1979-80, of all programs and courses surveyed (preclinical and clinical), 9.3% were required, 8.3% selective, and 82.4% elective.

TABLE V. TRAINING SITES

	Internal medicine	*Family practice*	*Psychiatry*
Average number of sites used per program	5.3	7.0	2.5
Most commonly used sites			
Nursing home	75.5%	100%	33.3%
General medicine ward (emphasis in geriatrics)	56.6%	72.2%	16.7%
Geriatric Evaluation Unit	54.7%	22.2%	20.0%
Family practice clinic	13.2%	26.4%	0
Geriatric clinic	69.8%	50.0%	20.0%
Patient's home	39.6%	61.1%	13.3%
Home care program	50.9%	61.1%	6.7%
Geropsychiatry unit	1.9%	5.6%	33.3%
Geropsychiatry ward	5.7%	5.6%	33.3%

Note: In 1979-80, most frequently used sites were nursing homes (76%), geriatric evaluation units (41%), senior citizen center (41%), geriatric clinics (35.6%), patient's homes (32%), and home care program (32%).

of all third and fourth year students. This figure corresponds closely with the results of the AAMC 1983 Graduation Questionnaire where 3.2% of the students reported clinical elective experience in geriatrics.[13] (The lower percentage in the current survey, 2.3%, can be explained by considering only participation in clinical programs, not including participation in brief elective lecture courses.)

Table V lists the training sites used in the clinical offerings. As can be seen, the nursing home predominates just as it did five years ago.

CASE STUDY

To help to explain these results, let us consider what transpires at many medical schools confronted by a faculty committed to the introduction of geriatric curricular content. The following scenario or case study is a composite of several American medical school experiences which we have learned of in a consultant capacity. Let us call this institution the Lamarck School of Medicine. The case study demonstrates some of the issues encountered by geriatrics faculty members when attempting to introduce geriatric/gerontologic education into the medical school curriculum.

In this particular medical school there were, as in most American medical schools, mandatory clerkships in core departments followed by very considerable elective time spanning a substantial portion of the fourth year, per-

mitting students to direct their educational activities toward their ultimate personal career goals. A small core (three to five) of highly motivated geriatrics faculty members — some representing products of the recent fellowship programs, others midcareer, and senior faculty memers who had made a career shift — made the decision that geriatric content should be introduced into the undergraduate clinical curriculum.

These geriatrics faculty members met on many occasions with key members of the dean's office, the faculty curriculum committee, and representative medical school faculty members to explain why it is important for undergraduate medical students to gain further knowledge about appropriate care for older persons. These initial discussions had as their major objective informing senior faculty members who represent the power base in the undergraduate curriculum about the special attitudes, content, and skills that comprise geriatrics and that make it different from educational activities elsewhere in the undergraduate curriculum. As an outcome of these efforts, geriatric faculty members were invited to attend departmental and schoolwide curriculum subcommittees and committees.

Following these activities, geriatrics faculty members were encouraged to propose a mandatory geriatric clerkship during either the third or fourth year. After long and heated debates with the curriculum committees of the departments involved, as well as with the schoolwide curriculum committee, the proposal failed because the curriculum was already considered overcrowded, and geriatrics was not considered crucial enough to warrant an unpopular encroachment on elective time. In denying the request to establish a mandatory clerkship, suggestions were made to the geriatrics faculty members to consider other innovative options to encourage but not force an undergraduate medical student to select a geriatric clinical experience.

In this particular instance, the geriatrics faculty members conceived of a "selective" program as an innovative option, that is, a mandatory choice from a small number of offerings. These offerings addressed content areas in the undergraduate curriculum that had unsuccessfully attempted to gain curricular time over almost a decade. This particular selective included geriatrics, bioethics, nutrition, medical-legal issues, human sexuality, drug and alcohol abuse and child abuse. The innovation included combining several of these important areas where there was very substantial overlap. This innovative selective program consumed a great deal of faculty time, because it now engaged a substantially larger number of faculty members, some of whom had negative attitudes toward trying yet again to teach subjects already denied curriculum time.

The many meetings described above were repeated once more, and discussions dwelt on the lack of a knowledge base for geriatrics and on difficulties curriculum committees have in bringing a multiplicity of disciplines into the undergraduate curriculum. When it appeared to the schoolwide curriculum committee that many of its members were convinced of the wisdom of the selective approach, those committee members still opposed recommended that major student undergraduate input be obtained in arriving at this decision. Questions about the capability of geriatrics faculty members to teach the 150 undergraduate students were side issues. The undergraduate medical students, not having thought seriously about these problems before, voiced the commonly stated opinion that the seniors informed them that most patients to whom they were assigned in the academic medical center were elderly.

The selective core faculty members were requested by the schoolwide curriculum committee to develop an extensive list of educational objectives and a highly explicit delineation of training sites and core curriculum, a phenomenon surpassing any already established undergraduate medical school program. Following their presentation, concern was expressed about a "quality" experience, and questions whether there might be a way for faculty members to study the outcomes of such an effort.

The "concerned" faculty members then developed an extensive evaluation plan and obtained foundation interest in introducing the selective program as part of a schoolwide educational study. The interested foundation had actually identified one of its priority areas in medical education as being geriatrics and gerontology. The proposal was presented to the schoolwide curriculum committee, the associate dean for educational research, and other senior faculty members who expressed concern that there was inadequate time in the curriculum and that the educational evaluation, even though superior to any carried out in the medical school to date, would probably not clearly establish the value of a selective experience including geriatrics.

Two years after the beginning of this scenario, which included multiple meetings, lobbying among faculty members, constructing objectives, developing a curriculum, delineating educational sites, and finally suggesting an innovative selective proposal with what everyone agreed was a superb research evaluation, the dean of the medical school called together the most senior faculty members committed to the selective program and personally urged them to permit the students at the Lamarck School of Medicine to choose these subjects from among a wide offering of excellent elective programs.

Constraints on Introduction of Geriatrics into the Clinical Curriculum

This scenario illustrates many of the constraints encountered in introducing geriatrics at any level of the medical training continuum. These constraints include:

Dearth of qualified faculty. The paucity of faculty members remains a major stumbling block to the implementation of clinical programs. Teachers are cajoled, begged, borrowed, and stolen from other pursuits. The number of graduates from advanced training programs whose major efforts are the production of new faculty members falls far short of the demand. Support for midcareer redirection has just begun, and the number of new faculty members appearing by this route is also very limited. This shortage of faculty members is particularly acute if, in addition to being few in number, faculty members are also relatively inexperienced in geriatrics and/or research; in such cases, they are bound to be far less productive and far less secure.

Although the critical mass of faculty members remains a matter for discussion, many medical schools have at best one to two full-time equivalents and, like their colleagues in the primary care specialties of family practice, and general internal medicine before them, they are overtaxed and their academic survival threatened. Institutional support for them often relies on intensive clinical programs and, although the clinical base is a prerequisite for any successful program, overcommitment in this area drains faculty resources when they should be directed toward establishing sound academic programs.

Overcrowded curricular time. The dilemma of our time is that schoolwide and departmental curriculum committees increasingly are confronted with worthy, important candidates clamoring for exposure in the medical undergraduate curriculum. Some of the nation's medical schools, as well as the Association of American Medical Colleges, are wrestling with this thorny issue, but in many schools inactivity is the by-word. In our view, one criterion in assigning curricular time should be epidemiologic. Geriatrics is thus a major contender in the light of the graying of our population.

Appropriate high quality training sites. Geriatrics implies the development of settings in environments and institutions that have not usually been associated with academic medicine, specifically: long-term care facilities, especially nursing homes; multipurpose senior centers designed to provide social services in the community; day centers; other types of centers for the well elderly; community screening and counseling centers for the frail but coping elderly; board and care facilities; and home care programs. For their

part, all these facilities do not eagerly leap to forge new alliances with academic centers. For them, such new relationships raise important issues about additional cost that the facilities must bear as a result of a teaching role in the face of increasing constraints on their resources. They also raise more subtle but very real fears about loss of institutional autonomy and the possible impact that education and research may have on established patterns of activity.

Appropriate departmental responsibility. Territorial battles have emerged among internal medicine, family practice, and psychiatry — the dispute being over where responsibilities lie for development of the undergraduate clinical curriculum. A number of possible solutions to the turf issue obviously exist, but, in the face of the paucity of faculty, consolidation or, failing this, coordination of such activities seems compelling, and some of the nation's medical schools have chosen this route.

Attitudes. The attitudes of faculty colleagues and students about the elderly, geriatrics, and faculty members concerned with the field remains a major problem. It is, in part, a manifestation of Butler's "ageism," but surfaces in many other ways. Content of the field is a favorite one, and when this issue is raised, a detailed response enumerating the knowledge, attitudes, and skills that constitute geriatrics/gerontology and its clinical practice becomes a necessity. The Institute of Medicine addressed the content issue, when it pointed out that the knowledge base in molecular biology, biochemistry, pharmacology, and other basic sciences as well as in the behavioral and social sciences and their clinical application was substantial and growing rapidly. Many curriculum committees remain unconvinced. There remains a major enigma among faculty members: on the one hand academicians discuss geriatrics as a subject more appropriate for other professionals than physicians, and almost simultaneously argue that geriatrics is already adequately and appropriately taught. They further state that what is now carried under that label is the kind of activity that any well-trained internist, family physician, or psychiatrist already does.

Financial resources. There was a temporary eruption of federal, some state and private support in founding major university-based efforts in geriatrics. Long-term survival of these programs will depend almost wholy on adequate resources on an ongoing basis. Elimination of some federal programs over the past few years, particularly in curriculum development and training, has rendered a great disservice to those institutions across the country which have been laboring to establish programs and are being deprived of the appropriate support as these programs are coming into fruition. During our present

period of no-growth budgets, new sources of support for faculty members specifically dedicated to geriatric medicine are desperately needed. There is early evidence that some states recognize their responsibility as demonstrated by increasing legislative efforts to provide geriatric training for health care trainees and professionals.

Education in the Clinical Years

It would seem appropriate to state our views concerning education in the clinical years. They may be interpreted as biases but are based on our recent experience.

The highly visible presence of a core faculty of geriatrics physicians is the key to affecting the practice patterns, attitudes, and skills of medical undergraduates and young physicians in caring for the elderly. This faculty must have a presence in the academic medical center, in long-term care facilities, and in ambulatory clinics. It should be able to synthesize the expertise of others involved in the care of the elderly and present it in a manner relevant to the medical students and house officers who care for older people.

To influence students successfully in the appropriate care for the elderly, we must once more recognize the key influence of the medical housestaff on students. It is essential that these post-M.D. physicians recognize the importance of geriatrics faculty teaching efforts and that they acquire the attitudes, knowledge, and skills to pass this on to their students. It is also axiomatic that resident physicians will not become advocates of geriatrics until the geriatrics faculty helps them in the management of their patients in both the inpatient and ambulatory services. In this vein, it is essential that geriatrics be taught in a factual manner supported by as much data as exists and as many key references as possible.

The curriculum must emphasize the care of the frail and dependent elderly whose chronic illnesses or physical or mental disability require the help of others in their daily activities. Clinical judgment about care of the elderly is a critical ingredient, and, while difficult to impart, requires the transmittal of some basic principles to clinicians in training. The usual clinical strategies almost invariably deserve alteration in very old patients.

Emerging clinicians should be taught about a number of specific problems that affect the elderly whose assessment and management usually lies with the general physician. These problems include the dementias, acute confusional states, instability and falls, pressure sores, and urinary incontinence.

The role of physicians in aiding elderly patients and their families in ar-

riving at long-term-care decisions must be recognized. Young clinicians must be prepared to assess the functional needs of patients and to aid in the provision of the resources to fill these needs. In so doing, young clinicians must recognize and understand the role of other disciplines critical to the care of the elderly and implementing them in an effective manner. Finally, emerging physicians must become familiar with the practical but ever-changing workings of the long-term-care system that is evolving in the United States. We are not recommending that the physician replace the social worker, but are convinced that the physician supplies critical complementary skills to the social worker in arriving at appropriate decisions about Medicaid, Medicare, intermediate care facilities, home health care agencies, skilled nursing facilities, and many other aspects of the support system that has developed. Absence of this input is evident to anyone who manages older patients in emergency rooms.

Policy Implications

The responsibility of the academic medical center, professional organizations within medicine including licensing boards, specialty societies, specialty boards, state and federal governments remains largely undefined. In some areas, the federal government must initiate change, for example, federal funds for the development of geriatric/gerontological health professional training programs to help redress the deficit of health professionals in geriatrics.

States also have an opportunity to take an active role in solving these problems. State legislative and executive efforts can help to focus and to define directions of change. The state frequently has leverage not available to the federal government. For example, state university systems can strongly influence and encourage changes in the shape of the curriculum. Among the options that should be considered by state governments are the following: establishment within each health professional school of a specific educational unit charged with teaching geriatrics and gerontology, and target funding to support these units; encourage a minimum curriculum in geriatrics for health professionals; offer incentives to health professionals entering geriatrics/gerontology; facilitate the development of demonstration projects in the care of older people, thus creating new "classrooms" and "research laboratories"; and consider the development of additional criteria for licensure.

SUMMARY

In closing, most schools of medicine have been increasing their attention to aging issues, but their activities remain very modest. Faculty members with special preparation in aging are in very short supply, and an increasing number of groups have identified faculty development as the critical element for future progress. To redress the current gap and to insure that future generations of physicians have appropriate preparation is a critical and complex challenge.

Current resources for education and training in geriatrics remain very limited. The 1981 White House Conference on Aging pointed out that the quality of services available to older people depends directly upon the quality of personnel who provide them.[14] All personnel involved in the delivery of such services should be required to have gerontological and/or geriatric training. The federal government needs to work with institutions of higher education, with professional, scientific and community organizations, and with the health professions to develop an educational strategy to accomplish this task.

Additional progress in the care of elderly patients requires a strong and highly visible geriatric force at each academic medical center. Full-time faculty physicians must have as their major focus research, service, and teaching in the care of older people. The scholarly efforts of these physicians must be supported and their research efforts nurtured if geriatric medicine is to be taught appropriately to students during their clinical years. Better training in geriatrics should result in a higher quality of care for older people, including the more effective maintenance of health and functional abilities while also reducing the costs of care.

Compared with our 1979-80 survey, results from 1983-84 show that while some progress can be reported, the geriatric education of clinical students is still very limited, especially taking into account the magnitude of the societal and medical issues involved. We need innovative rethinking about how to get new progress in this area.

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